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Loxodontomys pikumche (RODENTIA, CRICETIDAE). A NEW SPECIES FOR ARGENTINA

Agustina Novillo*, Agustina Ojeda, and Ricardo Ojeda

Grupo de Investigación en Biodiversidad (GIB), IADIZA, CCT Mendoza, CONICET, Casilla 507, 5500, Mendoza, Argentina *[Correspondencia: <anovillo@lab.cricyt.edu.ar>].

ABSTRACT: We report the first record of occurrence of *Loxodontomys pikumche* Spotorno et al., 1998, in the Central Andes of Argentina. We briefly describe external characters, skull, karyotype, and habitat; also, we provide general comparisons with the other known species in the genus, *L. micropus*.

RESUMEN: *Loxodontomys pikumche* (Rodentia, Cricetidae) nueva especie para Argentina. Se reporta el primer registro de ocurrencia de *Loxodontomys pikumche* Spotorno et al., 1998, para los Andes Centrales de Argentina. Se describen brevemente los caracteres externos, morfología craneal, cariotipo y hábitat; además, se ofrece una comparación general con la otra especie conocida en el género, *L. micropus*.

Key words. Andes. Mendoza. Phyllotini. Sigmodontinae.

Palabras clave. Andes. Mendoza. Phyllotini. Sigmodontinae.

As part of an extensive research program on systematics, biogeography, and ecology of Andean small mammals, we reported the occurrence of the «Pikumche pericote,» *Loxodontomys pikumche* Spotorno, Cofre, GM Manríquez, Vilina, Marquet, and Walker, 1998, for the first time in Argentina.

We collected four individuals referred to *L. pikumche* (one female and three males) in Las Leñas (35º 06' 25.9'' S; 70º 05' 57.9''W, 2460 m, Department of Malargüe, Province of Mendoza). The specimens were prepared following standard proceedings. Voucher specimens, cellular suspension, and tissue samples were deposited at the Colección Mastozoológica del Instituto Argentino de Zonas Aridas, IADIZA (CMI) with the numbers CMI 07382, CMI 07431, CMI 07432, and CMI 07433. Here, we describe briefly external and morphological characters, in addition to karyotype morphology and some aspects of the habitat characterization. We follow Reig (1977) for dental nomenclature, Steppan (1995) and Hershkovitz (1962) for cranial and mandible descriptions. Cranial measurements were taken with a digital caliper with an error of 0.5 following DeBlase and Martin (1981).

Chromosome preparations were obtained from bone marrow following the conventional colchicine-hypotonic solution (Verna and Babu, 1995). Ten to 15 metaphase spreads were counted. Nomenclature for chromosome morphology and fundamental number (FN) follows Patton (1967).

External morphology. *L. pikumche* is a medium size rodent, pelage short, dorsally grayish and slightly ochraceous. Under part presents tips of the hair whitish to dirty gray, with a dark color base. Tail is shorter than head and body length, bicolor, with sparsely hair without tuft. Medium size ears with very short hair and post auricular patches barely present.

Cranial morphology. comparisons between *L. pikumche* (CMI 07382) and *L. micropus* (CMI 5999) were made (**Fig. 1**). The nasals

are narrow and straight, and seem to be more convex in *L. micropus* (**Fig. 1D, c**). The interorbital region is narrow. Zygomatic arches are expanded posteriorly. The anterior border of zygomatic plate is straight vs. concave in *L. micropus* (**Fig. 1D, d**). The upper free border of the plate is roundish. The incisive foramina are well open with its posterior border reaching the first third of the M1. Posterior border of the palatine with a slightly developed median process; in *L. micropus* is more developed (**Fig. 1C, b**). The parapterygoid plates are expanded; foramen ovale is present and elongated; petrotympanic fossa is well developed and elongated along the anterior edge of the bullae. Bullae are moderately inflated with short eustachian tubes; stapedial spine is well developed and separated from the bullae. Coronoid process of the mandible is short not as developed as in *L. micropus* (**Fig. 1E, e**). Orientation of maxillary toothrow is parallel-sided, in *L. micropus* is posteriorly divergent (**Fig. 1C, a**); incisive are opisthodont; anterior medium flexus M1 is absent; hypoflexus M3 is reduced relative to M2; M3 presents an enamel island.

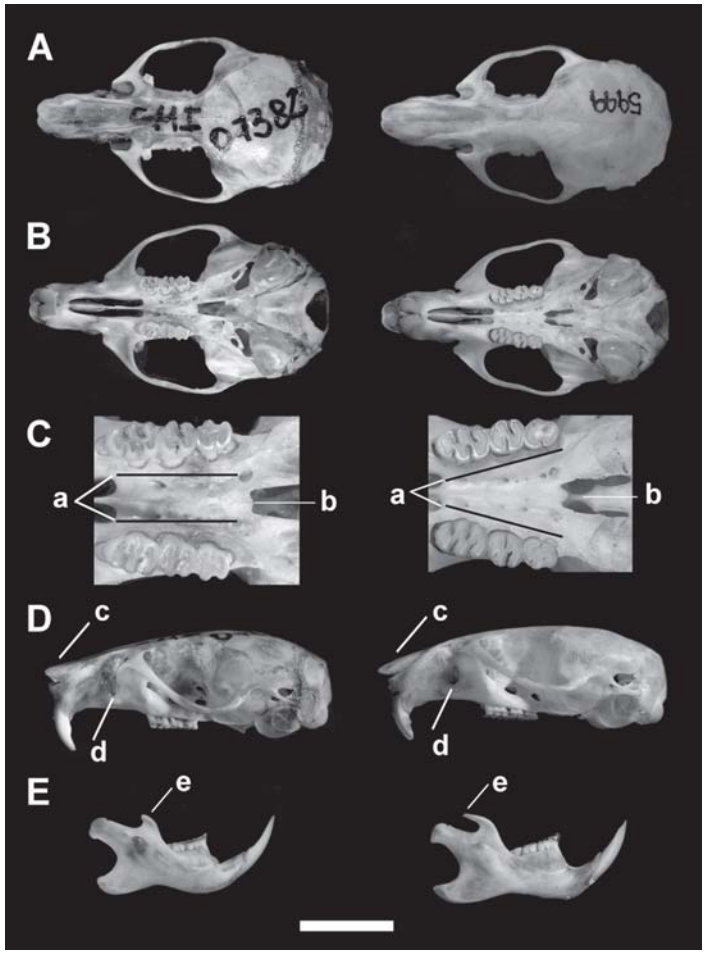

Fig. 1. Skulls of *Loxodontomys pikumche* (left) and *L. micropus* (right); A) Dorsal view; B) Ventral view; C) Palatal region; D) Lateral view; E) Mandible in labial view. **a-** Maxillary toothrow orientation*;* **b-** Median process of the posterior border of palatine*;* **c-** Nasal bone, **d-** Anterior border of zygomatic plate*;* **e-** Coronoid process. Scale = 10 mm.

External measurements (three males and one female, in millimeters). Total length = 217, 239, 240, 270; tail length, 96, 98, 100, 105; hind foot length (with claws), 27, 28, 25, 30; ear length, 19, 18, 20, 20; body weight (in grams): 52.5, 44, 46, 80.

Cranial measurements (in mm). One specimen of *L. pikumche* (CMI 07382, male) was measured. Condylobasal length, 29.8; least interorbital breadth, 4.1; zygomatic width, 17.4; greatest length of the skull, 31; basal length, 27.6; breadth of braincase, 13.9; maxillary tooth row, 5.6; tympanic bullae length (without tube) 4.8; mandibular tooth row, 16.5; diastema length, 8.3; incisive width, 3.1; incisive foramina length, 7.3; nasal width, 4.1.

These measures were compared with those reported by Spotorno et al. (1998) for specimens of Chile including the holotype. Several cranial measures of *L. pikumche* from Argentina were larger than those reported by Spotorno et al. (1998).

All specimens of *L. pikumche* were analyzed and presented a 2n = 32, FN = 32 (only referred to the autosome chromosomes). The autosome complement consists in 14 pairs of telocentric chromosomes and one pair of small metacentric chromosomes. Sexual chromosomes are telocentric (**Fig. 2**).

The «Pikumche pericote» occurs in habitats characterized by dense thorn scrub vegetation and dominated by *Adesmia obovata*, *Adesmia imbrincata*, *Chuquiraga oppositifolia*, and *Berberis empetrifolia;* mixed with grasses as *Poa holciformis* and *Hordeum comosum*. The habitat is similar to the one reported for Chile, although the individuals of *L. pikumche* captured in Las Leñas occurred along rocky and slender slopes, contrasting with the Chilean plains described by Spotorno et al. (1998). Other sigmodontine rodents that coexist in the area with *L. pikumche* are: *Chelemys macronyx*, *Abrothrix olivaceus*, and *Abrothrix andinus*.

We describe for the first time some features of the cranial morphology of *L. pikumche* which differentiate it from *L. micropus* (**Fig. 1**). The original description (Spotorno et al., 1998) only considered a list of characters based in Steppan (1995). The site of occurrence in Argentina is approximately 100 km south from the type locality in Chile «Cajón del Río Maipo.» The discovery of *L. pikumche* in the Central Andes reinforces the importance of the Andes as a major mountain ecosystem with a rich and singular diversity of small mammals. Furthermore, the rapid and diverse changes in land use (e.g. mining exploitation, crop ex-

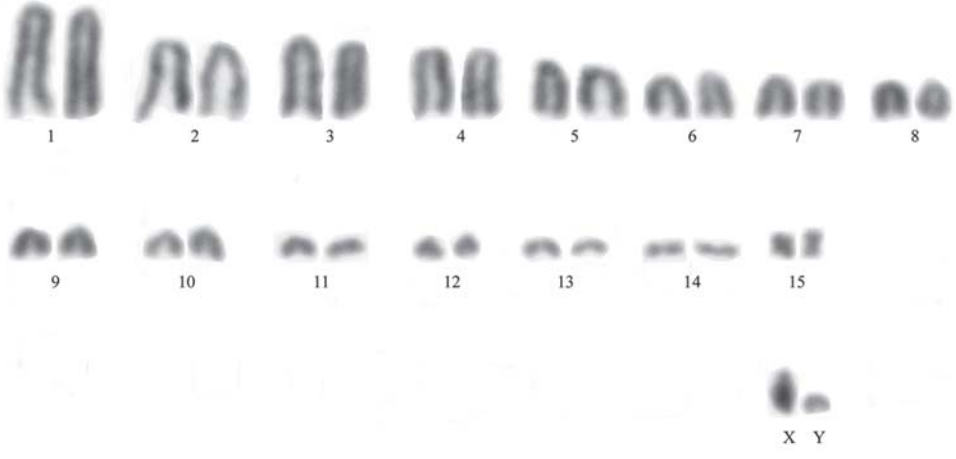

Fig. 2. Standard Giemsa-stained karyotype of *Loxodontomys pikumche* (2n = 32, FN = 32; CMI 07382). Sex chromosomes (XY) are also indicated.

pansion, others) highlights the urgent need of a biodiversity assessment program over large proportions of the territory of Argentina

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